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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,058	07/17/2003	Jordan M. Slott	P-7932	3987
24209	7590	10/06/2005		
GUNNISON MCKAY & HODGSON, LLP 1900 GARDEN ROAD SUITE 220 MONTEREY, CA 93940			EXAMINER HSU, JONI	
			ART UNIT 2671	PAPER NUMBER

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/623,058	Applicant(s) SLOTT ET AL.	
	Examiner Joni Hsu	Art Unit 2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4-10,21-23,32-37 and 45 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 4-7,21,22,32-35 and 45 is/are rejected.
- 7) ☒ Claim(s) 8-10,23,36 and 37 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/22/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on September 22, 2005 was filed after the mailing date of the application on July 17, 2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Amendment

2. In light of Applicant's amendments to Claims 7, 8, 10, 35, and 36, the rejections under 35 U.S.C. 112, second paragraph have been withdrawn.

3. Applicant's arguments filed July 25, 2005, with respect to Claims 4-7, 21, 22, 32-35, and 45 have been fully considered but they are not persuasive.

4. Applicant argues that Torborg (US005936616A) and Smith (US005212770A) do not teach "compressing one or more sub-images of the graphics image using a compression scheme...said compression scheme for each of said sub-images chosen based on said information in said data structure" (page 18).

In reply, the Examiner disagrees. Torborg does teach compressing one or more sub-images of the graphics image using a compression scheme (*compress subregions using either a lossy or lossless form of compression on each subregion*, Col. 2, lines 47-49), the compression

scheme for each of said sub-images chosen based on said information in said data structure (*data structure stores a tag or other identifier indicating which subregions of the display are currently stored in the cache, if the subregion containing the pixel location or locations needed to satisfy the write request are located in the cache, then the VFB controller allows the write to occur by directing the write request to the appropriate location in the cache, in order for the pixel data written to the cache to become part of the compressed display image, the VFB controller instructs the compressor to compress the subregion containing the newly written pixel data and store it in the compressed memory, Col. 7, lines 31-43*).

5. Applicant's arguments, see pages 20-22, filed July 25, 2005, with respect to Claims 8-10, 23, 36, and 37 have been fully considered and are persuasive. The rejections under 35 U.S.C. 103(a) of Claims 8-10, 23, 36, and 37 have been withdrawn.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 4, 21, 32, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torborg (US005936616A) in view of Smith (US005212770A).

9. With regard to Claim 4, Torborg describes a method for reducing the storage or bandwidth requirements of a graphics image or reducing CPU usage in a computer system (*reduces memory requirements in computer display architectures, memory bandwidth required to access the display image is greatly reduced*, Col. 3, lines 15-22), the method comprising updating a data structure with information (*VFB controller then updates its data structures to indicate that the newly decompressed subregion is now present in the cache*, Col. 8, lines 3-6) and compressing one or more sub-images of the graphics image using a compression scheme (*compress subregions using either a lossy or lossless form of compression on each subregion*, Col. 2, lines 47-49), each of the sub-images having a location, the location and the compression scheme for each of the sub-images chosen based on the information in the data structure (*data structure stores a tag or other identifier indicating which subregions of the display are currently stored in the cache, if the subregion containing the pixel location or locations needed to satisfy the write request are located in the cache, then the VFB controller allows the write to occur by*

directing the write request to the appropriate location in the cache, in order for the pixel data written to the cache to become part of the compressed display image, the VFB controller instructs the compressor to compress the subregion containing the newly written pixel data and store it in the compressed memory, Col. 7, lines 31-43).

However, Torborg does not teach that the method comprises recording a text command executed to create a portion of the graphics image and that the text command is used to update a data structure with information. However, Smith describes a method comprising recording a command executed to create a data display object or portion of the graphics image (Col. 2, line 67-Col. 3, line 2). The commands are text commands (Col. 10, lines 1-14; Col. 1, lines 54-57). Smith also describes that the text command is used to update a data structure with information (Col. 7, lines 10-12).

It would have been obvious to one of ordinary skill in this art at the time of invention by applicant to modify the device of Torborg to include recording a text command executed to create a portion of the graphics image and that the text command is used to update a data structure with information as suggested by Smith because Smith suggests that the text commands are needed so that the computer knows what operations to perform in order to get a desired result (Col. 10, lines 1-14). Text commands are well-known in the art and widely used. Many computers operate by executing text commands.

10. With regard to Claim 21, Claim 21 is similar in scope to Claim 4, and therefore is rejected under the same rationale.

11. With regard to Claim 32, Claim 32 is similar in scope to Claim 4, and therefore is rejected under the same rationale.

12. With regard to Claim 45, Claim 45 is similar in scope to Claim 4, except that Claim 45 is for a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method. Torborg describes executing a program of instructions (Col. 10, lines 1-14), so Torborg inherently discloses a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform the method. Therefore, Claim 45 is rejected under the same rationale as Claim 4.

13. Claims 5-7, 22, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torborg (US005936616A) in view of Smith (US005212770A), further in view of Taafe (US005179651A).

14. With regard to Claim 5, Torborg and Smith are relied upon for the teachings as discussed above relative to Claim 4. Torborg describes that the data structure identifies portions of the graphics image (Col. 7, lines 31-34).

However, Torborg and Smith do not teach that the data structure identifies the portion of the graphics image that was created with a specific drawing command. However, Taafe describes an apparatus for retrieval and processing of selected archived images for display at

workstation terminals (Col. 1, lines 1-5). Taafe describes that a data structure identifies the graphics image that was created with a specific drawing command (Col. 21, lines 21-65).

It would have been obvious to one of ordinary skill in this art at the time of invention by applicant to modify the devices of Torborg and Smith so that the data structure identifies the portion of the graphics image that was created with a specific drawing command as suggested by Taafe because Taafe suggests that in order to modify a portion of the graphics image, the computer must know what drawing commands have already been performed on it (Col. 21, lines 21-65).

15. With regard to Claim 6, Torborg describes that the data structure includes a list (Col. 22, lines 39-42, 51-52) specifying character set identifiers (Col. 6, lines 30-42).

16. With regard to Claim 7, Torborg describes determining if a set of character images already exists in a cache (Col. 7, lines 25-37); adding the set of character images (Col. 6, lines 30-42) to the display computer cache if the set of character images does not already exist in a cache (Col. 7, line 63-Col. 8, line 6); and utilizing the set of character images to display the one or more sub-images of the graphics image created (Col. 8, lines 7-16).

However, Torborg does not teach that the set of character images are utilized in a text command and that a text command created the one or more sub-images of the graphics image. However, Smith describes that the set of character images are utilized in a text command (Col. 21, line 40-Col. 22, line 45) and that a text command created the display objects (Col. 2, line 67-Col. 3, line 2).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify the device of Torborg so that the set of character images are utilized in a text command and that a text command created the one or more sub-images of the graphics image as suggested by Smith for the same reasons given in the rejection for Claim 4.

17. With regard to Claim 22, Claim 22 is similar in scope to Claim 7, and therefore is rejected under the same rationale.

18. With regard to Claim 33, Claim 33 is similar in scope to Claim 5, and therefore is rejected under the same rationale.

19. With regard to Claim 34, Claim 34 is similar in scope to Claim 6, and therefore is rejected under the same rationale.

20. With regard to Claim 35, Claim 35 is similar in scope to Claim 7, and therefore is rejected under the same rationale.

Allowable Subject Matter

21. Claims 8-10, 23, 36, and 37 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

22. The prior art taken singly or in combination do not teach or suggest the method of Claim 7, wherein the adding the set of character images includes determining if there is enough room in the cache on the display computer for the set of character images; removing cache entries until there is enough room in the cache, if there is not enough room in the cache on the display computer for the set of character images; sending a request to the display computer to create one or more new cache entries for the set of character images; and adding the set of character images to the list of sets of character images currently cached on the display computer, as recited in Claims 8, 23, and 36. Claims 9, 10, and 37 depend from these claims, and therefore also contain allowable subject matter.

23. The closest prior art (Celi) teaches that adding video data includes determining if there is enough room in the cache (211D, Figure 2) on the display computer for the video data (Col. 7, lines 46-49); removing cache entries until there is enough room in the cache, if there is not enough room in the cache on the display computer for the video data (Col. 9, lines 8-23, 33-40); sending a request to the display computer to create one or more new cache entries for the video data; and adding the video data to the list of video data currently cached on the display computer (Col. 7, lines 46-64). However, Celi does not teach compressing sub-images.

24. Another prior art (Johns) teaches a list of cache entries (Col. 10, lines 5-34). A driver controls which sections are added to the list and which memory sections are reclaimed for re-use or removed from the list (Col. 11, lines 6-14). The list is in the virtual frame buffer controller

(500, Figure 5; Col. 10, lines 5-21), which is considered to be a part of the host computer (308, Figure 3; Col. 7, lines 36-38). After removing one or more cache entries from the list, the host computer inherently sends one or more requests to reclaim physical memory or remove the cache entries (Col. 8, lines 18-25; Col. 11, lines 6-14). Therefore, Johns describes that the removing cache entries includes removing one or more cache entries from the list of cache entries on the host computer; and sending one or more requests to remove the cache entries, as recited in Claim 10. However, Johns does not teach that the method comprises recording a text command executed to create a portion of the graphics image and that the text command is used to update a data structure with information.

25. Another prior art (Epard) teaches that the drawing and processing (55, Figure 5A) are done on the host computer (50) and the information is sent to the display computer (60) (Col. 48, lines 28-40), as recited in Claim 10. However, Epard does not teach that the method comprises recording a text command executed to create a portion of the graphics image and that the text command is used to update a data structure with information.

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Celi (US005757386A) teaches deallocating previously allocated VRAM resources in order to increase the amount of available VRAM resources (Col. 4, lines 45-48).

2. Johns (US006366289B1) teaches a display controller and method for managing memory accesses to image stored in partially compressed form (Col. 2, lines 53-55).
3. Epard (US005241625A) teaches remotely sharing information among computers on which such information is presented as images on monitor screens (Col. 2, lines 48-50).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

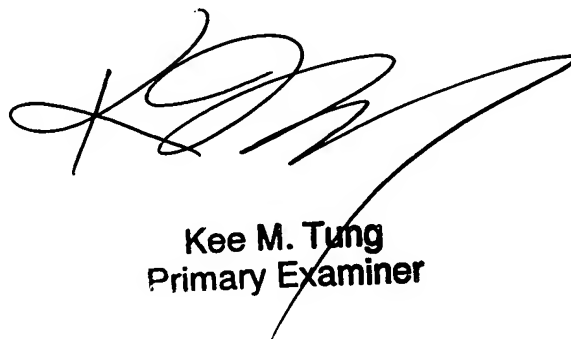
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joni Hsu whose telephone number is 571-272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JH



Kee M. Tung
Primary Examiner